

No. 1-2008 MONTHLY PACIFIC ENSO DISCUSSION FOR MICRONESIA AND AMERICAN SAMOA

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The Pacific ENSO Applications Center (PEAC) is preparing its first quarter 2008 Newsletter (refer to <http://www.soest.hawaii.edu/MET/Enso.html>). This Discussion complements the 4th quarter 2007 Newsletter. The Climate Prediction Center (CPC) stated the following in its January 10, 2008 *ENSO Diagnostic Discussion* (<http://www.cpc.ncep.noaa.gov>): **“La Niña is expected to continue into Northern Hemisphere spring 2008.”** In addition, the CPC noted: “La Niña remained at moderate strength during December 2007, with below-average sea surface temperatures (SSTs) extending from 160°E to the South American coast.” Equatorial SSTs were at least 1.0°C below average from 160°E to South America. In addition, below-average upper-ocean heat content in the central and eastern equatorial Pacific, stronger than average low-level easterly winds in the equatorial Pacific, and enhanced convection over the far western Pacific persisted. CPC stated: “Collectively, these oceanic and atmospheric conditions reflect a mature La Niña.”

Nearly all of the latest climate forecast models predict a continued pattern of below-average equatorial SSTs in the central Pacific into the spring of 2008. CPC noted that at “over half of the models predict a moderate strength La Niña to continue through February-April, followed by weaker La Niña conditions.

Moderate La Niña conditions are consistent with the observed atmospheric patterns in the western North Pacific. For example, tropical cyclone and monsoon activity over the past 6 months has been below normal and displaced to the west. The trade wind trough across the western North Pacific is stronger than normal and set up earlier than normal.

In December, the South Pacific Convergence Zone remained generally west of the Samoan Islands, reducing rainfall over American Samoa. Nevertheless, rainfall over the Samoa region should be slightly above average for the next few months. Trade winds should continue to dominate the flow in Micronesia, and a strengthening trade wind trough should keep most of Micronesia wetter than normal. The northern Marshall Islands will likely see some extended periods of dry weather, and the westward spread of cooler equatorial SSTs will reduce equatorial rainfall east of 145°E. Residents of Kapingamarangi and the northern Marshall Islands should closely monitor rainfall and implement water conservation measures. Monsoon and tropical storm activity for the first half of 2008 should be limited to western Micronesia, and the 2008 season could see a late start. The strong easterly trade winds will keep sea levels well above normal for the next few months in the western Pacific and in the Samoa region. High tides during new and full moon phases and La Niña effects could combine to cause coastal flooding in the Federated States of Micronesia through February.

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